

REMARKS

Applicants have carefully considered the November 15, 2005 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 13-18 are pending in this application. Claims 13-14 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b). Applicants submit that the present response places the application in condition for allowance. Entry of the response and prompt favorable reconsideration are respectfully requested.

Initially, Applicants respectfully request consideration of the Information Disclosure Statement previously submitted on March 6, 2006. Applicants respectfully request the Examiner to forward an appropriately initialed copy of the PTO-1449 with the next Office communication.

Claims 15-18 were rejected under 35 U.S.C. § 103(a) for obviousness as evidenced by Ichimura et al. (JP 10170955, hereinafter "Ichimura") in view of Nakanishi et al. (U.S. Pat. No. 5,962,916, hereinafter "Nakanishi"). Applicants respectfully traverse.

Claims 15, 16 and 17 were rejected under 35 U.S.C. § 103(a) for obviousness as evidenced by Kawasaki et al. U.S. Pat. No. 6,281,552, hereinafter "Kawasaki") in view of Nakanishi. Applicants respectfully traverse. It appears the Examiner inadvertently rejected claims 15, 16 and 17 under 35 U.S.C. § 102(b) in the statement of the rejection, since the body of the rejection on pages 4-5 of the Office action sets forth an obviousness rejection. Clarification by the Examiner is requested.

Independent claim 15 describe a display apparatus the display apparatus includes a layered structure of wire(s); and an optical element, formed on the layered structure of wire(s),

which has at least an anode, a luminous element layer and a cathode. The layered structure of wire(s) is provided in a contact hole formed in an insulating film in which a first insulating layer and a second insulating layer made of different material from each other are stacked in this order. The contact hole is formed by using a predetermined etchant, and the contact hole includes, at a boundary between the first insulating layer and the second insulating layer, a step difference caused by different etching rates of the first insulating layer and the second insulating layer when using the predetermined etchant. The layered structure of wire(s) includes: a first metal layer which is made of a refractory metal; a wiring layer, formed on the first metal layer, which is made of a metal whose resistance is lower than that of the refractory metal. The layered structure of wire(s) also includes a second metal layer, formed on the wiring layer, which is made of a refractory metal and is formed to have thickness such that any severance does not occur due to the step difference.

As admitted by the Examiner Ichimura and Kawasaki fail to disclose the contact hole including a step difference at a boundary between the first insulating layer and the second insulating layer, the step difference caused by different etching rates of the first insulating layer and the second insulating layer. See pages 3 and 5 of the Office action. Indeed, as clearly illustrated in Fig. 2 of Kawasaki the contact hole provided in the protective insulating film 150 and the interlayer insulating film 151 lacks a step difference. Further, it should be apparent from Fig. 2 of Ichimura that there is no step difference in the contact hole 23b provided in the SiO₂ film 18 and the SiN film 19.

Fig. 4 of the secondary reference to Nakanishi discloses a structure in which a step difference is formed at a boundary between the silicon oxide film 47 and the silicon nitride film 48 caused by different etching rates. In relation to this, the Examiner stated that "Nakanishi

discloses that because of the difference formed at a boundary between the first insulating layer and the second insulating layer caused by different etching rates in the contact hole, the contact failure can be prevented of the source and drain electrodes that are formed through the contact hole 30.” Applicants respectfully submit that the Examiner’s conclusions are not supported by the teachings of the references.

It is well established that in order to establish the requisite motivation, the Examiner must make "clear and particular" factual findings as to a specific understanding or specific technological principle which would have realistically impelled one having ordinary skill in the art to modify a particular prior art reference to arrive at the claimed invention based upon facts, not generalizations. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000); *Ecolochem Inc. v. Southern California Edison, Co.*, 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000); *In re Kotzab*, 217 F.3d 1365, 55 USPQ 1313 (Fed. Cir. 2000); *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). In so doing, the Examiner must provide facts and explain why one having ordinary skill in the art would have been realistically motivated to modify the prior art references to arrive at the claimed invention. *Ecolochem Inc. v. Southern California Edison, Co.*, *supra.*; *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). That burden has not been discharged.

Admittedly, Nakanishi describes at column 5, lines 23-25 that “contact failure can be prevented of the source electrode and drain electrode that are formed through the contact holes 30.” The description at column 6, lines 5-10, referring to Fig. 4, broadly reads on “a step difference formed at a boundary between the first insulating layer and the second insulating layer caused by different etching rates”. Applicants respectfully submit, however, that, “a difference formed at a boundary between the first insulating layer and the second insulating layer” causes

contact failure of the source electrode or the drain electrode formed through the contact hole 30. Thus, in direct contrast to the Examiner assertion, Nakanishi is unlikely to provide the effect of preventing contact failure. Accordingly, there is no factual basis for Examiner to combine the description at column 6, lines 5-10 with that of column 5, lines 23-25 and merely conclude that the contact failure can be prevented of the source and drain electrodes that are formed through the contact hole.

Applicants, therefore, submit that the imposed rejections under 35 U.S.C. §103 for obviousness predicated upon Ichimura in view of Nakanishi or Kawasaki in view of Nakanishi are not factually or legally viable and, hence, solicit withdrawal thereof. The dependent claims are free from the applied art in view of their dependency from independent claim 15.

It is believed that pending claims 15-18 are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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